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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/803,213

03/18/2004

Kenneth C. Shuey

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12/27/2005

WOODCOCK WASHBURN LLP
ONE LIBERTY PLACE, 46TH FLOOR
1650 MARKET STREET
PHILADELPHIA, PA 19103

EXAMINER

PATEL, PARESH H

ART UNIT

PAPER NUMBER

2829

DATE MAILED: 12/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/803,213

Applicant(s)

SHUEY, KENNETH C.

Examiner

Paresh Patel

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 14-17, 19-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/24 10-22-04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Species of fig. 3 (Claims 1-13 and 18) in the reply filed on 10/17/2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

4. The disclosure is objected to because of the following informalities: a voltage sensing portion as defined throughout the specification have multiple meanings and therefore it is not clear how fig. 2-3 relates to fig. 1.

Appropriate correction is required.

Claim Objections

5. Claim 3 is objected to because of the following informalities: "millamps" should read --milliamps--. Appropriate correction is required.

Drawings

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "501" has been used to designate both a resistive element and capacitor. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-2, 4, 7-13 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Munday et al. (US 5457621).

Regarding claim 1, Munday et al. (hereafter Munday) in fig. 1-3 discloses an electrical power meter having electronic components, wherein the electrical power meter receives alternating current (AC) voltage from an electrical power line, the meter comprising:

a power supply [20, 22, 24, 28] for converting the AC voltage [e.g. phase A voltage] to a direct current (DC) voltage [12v or 5v or 205v] for powering the electronic components [e.g. 14 or 16 or both], wherein the AC voltage provides an electrical reference potential [e.g. from 28 or VREF, see fig. 2] for the electronic components; and

a DC power source [+5 at 96, 26, VDD and/or +5.5, see fig. 2-3] in parallel circuit configuration with the AC voltage, wherein the DC power source provides a DC bias voltage [see fig. 2-3] to the AC voltage.

Regarding claim 2, Munday discloses the meter of claim 1, wherein the DC power source comprises a diode [100 in fig. 2 and diode in fig. 3].

Regarding claim 4, Munday discloses the AC voltage creates a relatively small voltage across the diode [for example at 100].

Regarding claim 7, Munday discloses the DC power source comprises a first resistive element [e.g. 98 with 100, see fig. 2] in series connection with the diode.

Regarding claim 8, Munday discloses the DC power source provides a DC voltage having a value that biases the AC voltage-based reference potential to a value that permits operation of the electronic components [14, see fig. 2].

Regarding claim 9, Munday discloses the electronic components comprise a voltage sensing circuit for sensing the AC voltage [see fig. 2].

Regarding claim 10, Munday discloses the voltage sensing circuit comprises a resistive divider circuit [for example 62 with 50, 52].

Regarding claim 11, Munday the resistive divider circuit comprises a first [50], second [52], and third [62] resistive element.

Regarding claim 12, Munday the first and second resistive element each have a value of approximately 1 megaohm [lines 38-39 of column 5].

Regarding claim 13, Munday the DC power source biases the AC voltage as a function of the AC voltage [see fig. 2].

Regarding claim 18, Munday the AC voltage-based reference potential is greater than negative power supply rail [due to drop at resistive divider, see lines 37-60 of column 5].

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 3 and 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Munday as applied to claims 2 and 1 above.

Regarding claim 3, Munday discloses all the elements except for the diode has a forward bias current of approximately 0.5 milliamps and a forward bias voltage of approximately 0.584 volts. Rather, Munday discloses the diode as mentioned above but is silent about diodes ratings as claimed here. It would have been an obvious matter of design choice for one having ordinary skill in the art at the time the invention was made to select such ratings as claimed, since equivalent structure i.e. diode is used in the meter of Munday and selection of known diode rating as claimed with meter, were art recognized equivalents to control electrical parameter e.g. the current and/or voltage, with characteristic of the diode.

Regarding claim 6, Munday discloses all the elements including the diode. However, is silent about an IN914 diode. It would have been an obvious matter of design choice for one having ordinary skill in the art at the time the invention was made, since equivalent structure i.e. diode was used in the meter of Munday and selection of known diode as claimed with meter, were art recognized equivalents to control electrical

parameter e.g. the current and/or voltage, in electrical/electronic circuits with different characteristic of the diode.

Regarding claim 5, Munday discloses all the elements including the diode. However, Munday is silent about a dynamic AC impedance of the diode is approximately an order of magnitude less than a DC impedance of the diode. It would have been an obvious matter of design choice for one having ordinary skill in the art at the time the invention was made, since equivalent structure i.e. diode was used in the meter of Munday and selection of known diode with impedances as claimed with meter, were art recognized equivalents to control electrical parameter e.g. the current and/or voltage, in electrical/electronic circuits with different characteristic of the diode.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paresh Patel whose telephone number is 571-272-1968. The examiner can normally be reached on 8:00 to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fahmy Wael can be reached on 571-272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Paresh", with a stylized flourish extending from the end.

December 22, 2005

Paresh Patel
Primary Examiner
Art Unit 2829